

April 8, 2005

Mr. Christopher M. Crane, President
and Chief Executive Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BRAIDWOOD STATION, UNIT 1 - RESPONSE TO NUCLEAR REGULATORY
COMMISSION BULLETIN 2003-02, "LEAKAGE FROM REACTOR PRESSURE
VESSEL LOWER HEAD PENETRATIONS AND REACTOR COOLANT
PRESSURE BOUNDARY INTEGRITY" (TAC NO. MC0523)

Dear Mr. Crane:

On August 21, 2003, the U.S. Nuclear Regulatory Commission (NRC) issued NRC Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity," to the industry. This bulletin informed addressees that current methods of inspecting the reactor pressure vessel (RPV) lower heads may need to be supplemented with bare-metal visual inspections in order to detect reactor coolant pressure boundary leakage. The bulletin also requested these addressees to provide the NRC with information related to inspections that have been performed to verify the integrity of the RPV lower head penetrations.

The bulletin requested that addressees provide a description of the RPV lower head penetration inspection program that would be implemented at their respective plants during the next, and subsequent, refueling outages. This description was to include the extent of the inspection, the inspection methods to be used, the qualification standards for the inspection methods, the process used to resolve the source of findings of boric acid deposits or corrosion, the inspection documentation to be generated, and the basis for concluding that their plant satisfied applicable regulatory requirements related to the structural, and leakage integrity of the RPV lower head penetrations.

By letter dated September 22, 2003, (ML032691399), Exelon Generation Company, LLC (Exelon) provided its response to this request for Braidwood Station (Braidwood), Unit 1. Exelon committed to perform a bare-metal visual examination of the RPV lower head surface and penetrations during the fall 2004 refueling outage at Braidwood, Unit 1. Exelon noted that a bare-metal visual examination of the RPV lower head surface and penetrations was performed during the spring 2003 refueling outage at Braidwood, Unit 1. In its same response, Exelon indicated that the extent, and frequency of subsequent visual examinations of the RPV lower head penetrations, beyond the fall 2003 refueling outage, will follow the appropriate NRC and industry guidance as well as the standardized EGC Procedure ER-AP-331-1001, "Boric Acid Corrosion Control (BACC) Inspection Locations, Implementation, and Inspection Guidelines." The NRC staff notes that there are a number of ongoing industry, and NRC staff activities related to developing criteria for RPV lower head penetration inspections. The NRC staff expects that the criteria for these inspections will involve periodic bare-metal visual examinations or their equivalent.

The bulletin also requested that addressees provide a summary of the RPV lower head penetration inspection that was performed at their plants, the extent of the inspection, and the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits, and any corrective actions taken as a result of indications found.

By letter dated December 13, 2004, (ML043520121), Exelon provided a summary of its inspection results at Braidwood, Unit 1 for the fall 2004 refueling outage. Exelon reported that it had performed a 360-degree bare-metal visual examination on all 58 RPV lower head penetrations. Exelon did not observe any evidence of RPV lower head penetration leakage.

Based on its review of Exelon's responses to NRC Bulletin 2003-02, the NRC staff finds that Exelon has met the reporting requirements of the bulletin for Braidwood, Unit 1. Accordingly, technical assignment control no. MC0523 is closed for Braidwood, Unit 1.

Sincerely,

/RA/

George F. Dick, Senior Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. STN 50-456

cc: See next page

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The bulletin also requested that addressees provide a summary of the RPV lower head penetration inspection that was performed at their plants, the extent of the inspection, and the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits, and any corrective actions taken as a result of indications found.

By letter dated December 13, 2004, (ML043520121), Exelon provided a summary of its inspection results at Braidwood, Unit 1 for the fall 2004 refueling outage. Exelon reported that it had performed a 360-degree bare-metal visual examination on all 58 RPV lower head penetrations. Exelon did not observe any evidence of RPV lower head penetration leakage.

Based on its review of Exelon's responses to NRC Bulletin 2003-02, the NRC staff finds that Exelon has met the reporting requirements of the bulletin for Braidwood, Unit 1. Accordingly, technical assignment control no. MC0523 is closed for Braidwood, Unit 1.

Sincerely,
/RA/

George F. Dick, Senior Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. STN 50-456

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